



[7590-01-P]

## NUCLEAR REGULATORY COMMISSION

[NRC-2012-0271]

### Environmental Assessment and Finding of No Significant Impact

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Notice of availability.

**FOR FURTHER INFORMATION CONTACT:** Thomas Weaver, Project Manager, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: 301- 251-7654; e-mail: [Thomas.Weaver@nrc.gov](mailto:Thomas.Weaver@nrc.gov).

### SUPPLEMENTARY INFORMATION:

#### I. Introduction

The Nuclear Regulatory Commission (NRC or the Commission) is preparing to initiate a paleoliquefaction research project to characterize historic earthquakes in the Central and Eastern United States. Geologic reconnaissance will be performed along select river banks in the states of Arkansas, Kentucky, Mississippi, Missouri, Tennessee and Virginia as part of this project. Paleoliquefaction features are geologic features such as sand blows and sand dikes that formed during historic and pre-historic earthquakes as a result of soil liquefaction, where soil liquefaction is the process of water pressure increasing in the soil due to cyclic shaking with an associated significant decrease in soil strength. The results from this research will be used to update models implemented in probabilistic seismic hazard analyses, which are used in evaluating sites for new nuclear power reactors to characterize ground motions in accordance with section 100.23(d)(1) of Title 10 of the *Code of Federal Regulations* (10 CFR).

The NRC has prepared an Environmental Assessment (EA) to evaluate the potential environmental impacts that may arise as a result of this research project in accordance with the requirements of 10 CFR Part 51, NRC's regulation implementing Section 102(2) of the National Environmental Policy Act of 1969 as amended. Based on the EA, and in accordance with 10 CFR 51.31(a), the NRC has concluded that a Finding of No Significant Impact (FONSI) is appropriate. Field work for this project will commence following publication of this document.

## **II. EA Summary**

The NRC has prepared the EA to evaluate the potential environmental impacts of the geologic reconnaissance to be performed along select rivers for this project. In accordance with Section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.), the NRC staff requested informal consultation with the United States Fish and Wildlife Service. No concerns were identified for Federally listed species or designated critical habitat. This project is temporary, minimally invasive, and will occur outside the critical nesting times for migratory birds. Further, researchers will avoid mussel beds and active nests, and will minimize disturbance to vegetation.

Similarly, the NRC determined that there will be no adverse effects to any historic or cultural resources that may be located in the paleoliquefaction study's area of potential effects (APE) within the states of Arkansas and Missouri. The State Historic Preservation Officers (SHPOs) of Arkansas and Missouri have concurred with this finding. Consultation will be initiated with the Kentucky, Mississippi, Tennessee, and Virginia SHPOs and the National Historic Preservation Act, Section 106 process will be completed prior to commencing any ground disturbing activities in those states.

Finally, the NRC has determined that there will be no significant impacts to any other resource areas (e.g., surface water, groundwater, air quality) as a result of the paleoliquefaction research study.

### **III. Finding of No Significant Impact**

On the basis of the EA, NRC has concluded that there are no significant environmental impacts from the proposed paleoliquefaction research study and has determined not to prepare an environmental impact statement.

### **IV. Further Information**

Documents related to this action, including supporting documentation, are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/reading-rm/adams.html>. From this site, you can access the NRC's Agencywide Document Access and Management System (ADAMS), which provides text and image files of NRC's public documents. The ADAMS accession numbers for the documents related to this notice are: ML12306A311. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at 1-800-397-4209, 301-415-4737 or by email to [pdr.resource@nrc.gov](mailto:pdr.resource@nrc.gov).

These documents may also be viewed electronically on the public computers located at the NRC's Public Document Room (PDR), O 1 F21, One White Flint North, 11555 Rockville Pike Rockville, MD 20852. The PDR reproduction contractor will copy documents for a fee.

Dated at Rockville, Maryland this 2<sup>nd</sup> day of November, 2012.

For the Nuclear Regulatory Commission.

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Rosemary T. Hogan, Chief,  
Structural, Geotechnical, and Seismic Engineering Branch,  
Division of Engineering,  
Office of Research,